

PATENT  
ATTORNEY DOCKET NO. 38184.03402US  
U.S. Serial No. 10/821,326

Remarks

Applicants timely submit this response to the Examiner's Office Action of May 1, 2009 within the shortened statutory period for reply which expires on August 1, 2009. The Office Action has been carefully considered and the following remarks are made in response thereto. Applicants note that this is the fourth non-final office action received during prosecution of this application. The previous office action dated February 26, 2009 has been vacated by the Office.

Claims 23, 106, 116, 129, 133, 137, 141 and 145-148 have been amended. Claims 1-22, 24-28, 30, 32-95, 100-105, 112-113, 115, 119-120, 122, 130-132, 134-136, 138-140, 142-144 and 149-153 are cancelled. New claims 154-156 have been added. Applicants respectfully submit that no prohibited new matter has been added.

Support for the amendments to the specification can be found, for example, on page 5, lines 12-17 and page 9, lines 5-6 of prior-filed U.S. Provisional Application No. 60/461,547, filed on April 9, 2003 and page 2, lines 21-24, page 3, lines 23-29 and page 5, lines 4-5 of U.S. Provisional Application No. 60/518,994, filed on November 11, 2003. These portions supporting micronized particles having a particle size between 0.001 microns to 25 microns of the Provisional Applications were inadvertently omitted from the instant specification. Under 37 C.F.R. § 1.57 (a), an inadvertently omitted portion of a filed provisional application—to which an application claims benefit of priority under 37 C.F.R. § 1.78—is considered incorporated by reference into the application claiming priority to the provisional application. The relevant portion of § 1.57 (a) provides that:

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if all or a portion of the specification or drawing(s) is inadvertently omitted from an application, but the application contains a claim under § 1.55 for priority of a prior-filed foreign application, or a claim under § 1.78 for the benefit of a prior-filed provisional, non-provisional, or international application, that was present on the filing date of the application, and the inadvertently omitted portion of the specification or drawing(s) is completely contained in the prior-filed application, the claim under § 1.55 or § 1.78 shall also be considered an incorporation by reference of the prior-filed application as to the inadvertently omitted portion of the specification or drawing(s). (emphasis added).

Accordingly, the portions of prior-filed U.S. Provisional Application Nos. 60/461,547 and 60/518,994 added to the instant specification are properly incorporated by reference therein.

Claims 23, 106, 116, 129, 133, 137, 141 recite the limitation "wherein the micronized particles of the basic copper carbonate, copper carbonate or copper hydroxide are distributed in the wood product and render the wood product resistant to fungal decay." Support for the amendment may be found throughout the specification and, for example, page 4, lines 5-6 and 9-10; page 9, lines 18-32; and Examples 6, 7, 8, 9, 10 and 13.

Support for "vacuum and/or pressure treatment" of claims 106, 145-148 and 154-155 can be found at least at page 3, lines 26-28, Examples 1, 2, 3 and 5 of U.S. Provisional Application No. 60/461,547, filed Apr. 9, 2003, at least at page 2, lines 26-29, Examples 6, 7, 8 and 10 of U.S. Provisional Application No. 60/518,994, filed Nov. 11, 2003, and [0015], [0048], [0049], Examples 6, 7, 8 and 10 of U.S. Non-Provisional Application No. 10/821,326, filed April 9, 2004.

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*Information Disclosure Statements*

Applicants have reviewed their files and are unable to find a copy of the signed and initialed Form PTO/SB/08a filed with the Information Disclosure Statement on June 20, 2006. A copy of the Information Disclosure Statement and the Electronic Acknowledgement of Receipt are enclosed for the convenience of the Examiner. The Examiner is requested to consider the references cited in the Information Disclosure Statement and indicate the same by returning a properly signed and initialed copy of the enclosed Form PTO/SB/08a with the next Office Action.

Applicants file concurrently herewith a Sixth Supplemental Information Disclosure Statement for consideration by the Examiner.

In view of the amendments and following remarks, Applicants respectfully request reconsideration and reexamination of this application and the timely allowance of the pending claims.

**I. Summary of the Interviews**

Applicants sincerely thank the Examiners for the courtesy of their time during the interview on March 31, 2009. Present at this interview were inventors Robert Leach and Dr. Jun Zhang; Examiners Courtney Brown and Mina Haghighatian; and Applicants' representatives Einar Stole and Soheui Choe. The Examiners and Applicants' representatives discussed the prior art of record, outstanding rejections and proposed claim language, which is embodied in the attached amendment. The inventors provided a description of the state of the prior art at the time the invention was made.

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Applicants thank Examiners Johann Richter and Courtney Brown for the courtesy of a telephonic interview with Applicants' representative, Einar Stole, on April 13, 2009. During the telephonic interview, the Examiners indicated that the outstanding Office Action and rejections of February 26, 2009 would be vacated and a new Office Action would be issued.

Applicants also thank Examiners Johann Richter and Courtney Brown for the courtesy of an interview on June 3, 2009. Present at this interview were inventor Robert Leach; Examiners Courtney Brown and Johann Richter; and Applicants' representatives Einar Stole and Enrique D. Longton. Applicant discussed the teachings of the prior art and specifically pointed out that Goettsche does not use the particulate copper required by the claims for the treatment of wood. Goettsche discloses copper solubilized with an alkanolamine. Applicants additionally used the teaching of West (US Patent 6,306,202 B1) to show copper salts such as copper hydroxide and copper carbonate must be rendered water soluble to be effective as a wood preservative. The teaching of Kartal *et al.* demonstrate the unpredictability of the use of micronized copper as a wood preservative at least as late as 2009. Currently, the instant application is in condition for allowance pending an updated search. The Examiner promised to examine the amended claims as soon as a response is filed.

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### III. Response to the Office Action

#### 1. Provisional Obviousness-Type Double Patenting

Applicants respectfully request that all provisional, obviousness-type double patenting rejections be held in abeyance, until indication of allowable subject matter, at which time applicants respectfully request withdrawal of all such rejections as applied to the pending claims.

#### 2. Claim Rejections under 35 U.S.C. §103(a)

A. Claims 22, 23, 25-29, 31, 35-37, 69-99, 106-111, 114-118, 121, 122 and 129-144 stand rejected under 35 USC § 103(a) as allegedly unpatentable over JP S61-246002<sup>1</sup> ("Oota") and AU-B-15117/92<sup>2</sup> ("Goettsche") in view of U.S. Patent 5,438,034 to Walker.

By this Amendment, independent claims 23, 106, 116, 129, 133, 137, 141 are amended to recite the limitation "the micronized particles of the basic copper carbonate, copper carbonate or copper hydroxide are distributed in the wood product and render the wood product resistant to fungal decay."

##### a. Overview

Applicants respectfully traverse this rejection, because the Office has not established a *prima facie* case of obviousness. First, the references of record not only fail to disclose the claimed wood preservative methods comprising copper particles, Oota and Goettsche

<sup>1</sup> A copy of JP S61-246002 was submitted for consideration in the Information Disclosure Statement filed on May 4, 2007 and made of record by the Examiner.

<sup>2</sup> This Australian patent application to Goettsche has a U.S. counterpart—U.S. Patent No. 6,441,016 ("the '016 patent"). The specification of the '016 patent is identical to U.S. Patent No. 5,635,217 ("the '217 patent") to which the '016 patent claims priority. The '217 patent was submitted to the USPTO for consideration in the Information Disclosure Statement filed on May 4, 2007 and made of record by the Examiner.

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fail to disclose or suggest any copper particles dispersed in water. Second, the Office employs an improper hindsight analysis, using Applicants' own disclosure as motivation to modify the cited references to allegedly obtain the claimed invention. Except for Applicant's own disclosure, a person having ordinary skill in the art at the time the invention was made would have had no motivation to modify Oota, as suggested by the Examiner. Third, a person of ordinary skill in the art would not have had a reasonable expectation of successfully obtaining the claimed invention, after modifying the disclosure of Oota with the disclosure of Goettsche. At the time the invention was made, a person of ordinary skill in the art considered it necessary to render water soluble copper compounds that were water insoluble, before they could be used as effective wood preservatives. (See U.S. Patent No. 6,306,202 ("West"); col. 1, lines 25-31). Finally, as late as 2009, persons of ordinary skill in the art of wood preservation technology recognized the unpredictability of nanoparticle behavior, and copper nanoparticles in particular, and considered the leach resistance of nano-particulate copper as a wood preservative a surprising and unexpected benefit.

**b. Oota**

Oota discloses a method of manufacturing treated timber by filtering and fixing non-flammable inorganic compounds into the cellular texture of timber. (See Oota at page 2, column 1). Timber treated by the Oota method is described as having low flammability, antiseptic and insect repellant qualities. (See Oota at page 2, column 2). The inorganic compounds exemplified in Oota are silicone dioxide, calcium carbonate, aluminum oxide and titanium oxide. Oota does not disclose or suggest any copper compounds.

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**c. Goettsche**

Goettsche does not disclose or suggest any wood preservative methods or compositions comprising copper particles. Goettsche discloses wood-treatment solutions comprising dissolved copper where the solutions are prepared by dissolving water-soluble copper salts or water-insoluble copper salts, using an alkanolamine as the copper solubilizing agent. Regardless of the source (water soluble or water insoluble copper compounds), the wood treatment solutions are just that—solutions of dissolved, solubilized copper. As such, Goettsche represents the state of the art in wood preservation at the time of the invention. In fact, none of the references of record disclose or suggest methods for introducing copper particles into wood to thereby render the treated wood product resistant to fungal decay.

Applicants respectfully submit that the Office has misinterpreted and therefore incorrectly applied the Goettsche reference. For at least this reason, the Office has not established a *prima facie* case of obviousness. When describing the preparation of the disclosed soluble copper compositions, Goettsche states that “copper compounds can be used as water soluble or water insoluble compounds, for example ... copper hydroxide, copper oxide ... or basic copper carbonate.” (See page 2, lines 4-7). These copper compounds are disclosed as the starting materials for preparation of the soluble/solubilized copper compositions. Goettsche discloses wood-treatment compositions comprising dissolved copper that are prepared by contacting the copper compounds with an alkanolamine (an amine) in amounts “sufficient for complexing the copper (1 g atom of copper requires about 4 mol equivalents of amine).” (See page 1, lines 9-11; page 2, lines 16-18). *The purpose of the alkanolamine is to solubilize water-insoluble copper by complexation.* The resulting compositions of Goettsche are clear aqueous liquids formed by

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dilution with water. (See page 1, lines 25-26). The insoluble copper compounds of Goettsche are solubilized in the presence of a copper-solubilizing agent (the alkanolamine) and are never disclosed as solids, let alone micronized particles, in the wood preservative *solutions* of Goettsche.

The Goettsche reference states that the copper salts used in the wood preservative compositions of the reference are *dissolved copper salts*:

*Dissolving the copper salts*, if necessary with heating, in the alkanolamines, with or without the addition of acid, water or solvents, and subsequent addition of the emulsifier, the triazole compounds and/or phosphonium compounds result in the formation of highly concentrated pastes, liquid concentrates or two-phase mixtures which, after dilution with water, can be used for impregnating wood. *They give a clear liquid in water, even at high concentration.* [emphasis added] (See page 7, lines 24-32).

Because Goettsche does not disclose or suggest the use of copper particles in methods for the treatment of wood, the Office has misinterpreted and misapplied Goettsche. The Examiners' conclusion that it would have been obvious to a person of ordinary skill in the art to substitute the insoluble inorganic compounds of Oota with the insoluble inorganic compounds of Goettsche is factually incorrect (as discussed above, the preservative solutions of Goettsche use dissolved or solubilized copper). The Office has therefore not established *prima facie* obviousness.

**d. Walker**

The Office next acknowledges that Oota and Goettsche do not teach didecyldimethylammonium carbonate and didecyldimethylammonium bicarbonate quaternary compounds (Office Action at page 14). In order to cure this deficiency, the Office relies on Walker.



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Walker is directed to the use of didecyldimethylammonium carbonate and didecyldimethylammonium bicarbonate as a preferred carbonate quaternary compound for use as wood preservatives. Walker does not disclose the claimed invention or cure any of the deficiencies noted above for Oota or Goettsche.

Walker is completely silent as to a dispersion in water of micronized particles of basic copper carbonate, copper carbonate or copper hydroxide between 0.001 and 25 microns in water or a milled copper carbonate with a particle size of between 0.001 and 25 microns of the pending claims. Walker discloses quaternary ammonium carbonate compositions and their preparation using the indirect synthesis of C<sub>1</sub>-C<sub>20</sub> alkyl or aryl-substituted alkyl, C<sub>8</sub>-C<sub>20</sub> alkyl quaternary ammonium carbonate compositions from corresponding quaternary ammonium chlorides and methods for preserving a wood substrate using the quaternary ammonium carbonate compositions.

**e. No Motivation to Combine Oota and Goettsche**

In the section entitled "Finding of Prima facie Obviousness Rationale and Motivation (MPEP 2142-2143)", the Office states that:

"[t]he claims would have been obvious because the substitution of the insoluble inorganic compounds taught by Yoshihiro Oota et al. with the insoluble copper compounds and organic biocides used in the wood preservation composition of Goettsche et al. would have yielded predictable results to one of ordinary skill in the art at the time of the invention."

(See, Office Action of May 1, 2009 at page 14)

A person of ordinary skill in the art would have had no reason to substitute or replace the silicon dioxide, calcium carbonate, aluminum oxide or titanium oxide of Oota with insoluble copper. First, Oota makes no suggestion to use copper particles of any kind and Goettsche makes no

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suggestion that copper be used as solid particle. All of the treatment solutions of Goettsche contain dissolved/solubilized copper. To modify the teachings of Goettsche, a person of ordinary skill in the art would not only have to convert the soluble copper to copper particles (in direct contrast to the teachings of Goettsche), but would also have to exclude the copper-solubilizing agents (alkanolamines) that are an integral part of the compositions and methods of Goettsche. By requiring the presence of a solubilizing agent, Goettsche teaches away from the particles and methods of the claimed invention.

The Examiner's conclusions run contrary to the teachings of Goettsche and contrary to what a person of ordinary skill in the art would have understood at the time of the invention. In the Office Action of February 26, 2009, which was vacated on May 1, 2009, the Examiner relied on Heuer (U.S. Patent No. 5,874,025), to reject the same claims as those rejected in the Office Action of May 1, 2009, in much the same way as the Examiner uses Goettsche in the instant rejection. Similarly, Heuer discloses *solubilized* copper compounds in wood preservative compositions. Nothing in Heuer teaches using dispersions in water of micronized *particles* of copper compounds wherein the micronized copper compounds are distributed in the wood product and render the wood product resistant to fungal decay. Heuer discloses acidic copper-solubilizing agents, such as polyaspartic acid, as replacements for basic amine-based solubilizing agents, such as alkanolamines. Specifically, Heuer states:

A further aim is to reduce the loss of alkanol amines, caused by evaporation or leaching, for ecological and work-hygiene reasons. This is best achieved by markedly reducing the amount of alkanol amine (if appropriate down to zero) and by another substance fully or partly replacing the former in its function. (See Heuer at 1:47-52)

and

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Despite the greatly reduced alcohol amine content, *the copper compound is dissolved as a clear solution*. Nor are any insoluble copper/polyaspartic acid addition products observed, as is known in some cases for the biuret reaction  $\text{Cu}^{2+}$  + protein. [emphasis added] (See Heuer at 2:9-13).

and

*The dissolving of the copper salts*, if appropriate with the addition of heat, in polyaspartic acid/derivatives thereof, if appropriate with the addition of acid, water, alkanolamine or solvent, and subsequent addition of the emulsifier, the triazole compounds and the synergistic component, results in highly concentrated pastes, liquid concentrates or else two-phase mixtures which after dilution with water can be used for impregnating wood. *They result in a clear fluid, even when their concentration in water is high*. [emphasis added] (See Heuer at 19:19-27).

Both Heuer and Goettsche are representative of the state of the art at the time the invention was made. *Copper and copper salts for use in wood preservative compositions, if they were initially insoluble, were solubilized using solubilizing agents*. The references of record demonstrate that copper-based wood preservatives contained dissolved/solubilized copper compounds and not the micronized copper particles required by the claims. The references of record provide no suggestion to substitute dissolved copper in wood preservative compositions with micronized copper particles.

A *prima facie* case of obviousness has not been made by the Office because the cited references, Oota and Goettsche, do not teach specific limitations required by the claims and none of the other references of record cure these deficiencies. Failing this, Applicants respectfully assert that the Office has applied an improper hindsight analysis using Applicants' own disclosure against them. In other words, the only teaching of the required micronized particles of basic copper carbonate, copper carbonate or copper hydroxide is in Applicants' own disclosure. Using

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these teachings against Applicants amounts to hindsight reconstruction of what Applicants claim. This is improper.

**f. No Reasonable Expectation of Producing the Claimed Invention**

A person of ordinary skill in the art would not reasonably expect that the Office's modifications of Oota by Goettsche would produce a wood preservative suitable for use in the claimed methods. In other words, a person of ordinary skill in the art of wood preservation would not have a reasonable expectation that a wood preservative composition comprising the micronized particles of copper carbonate, basic copper carbonate and copper hydroxide, would render wood resistant to fungal decay. (See U.S. Patent No. 6,306,202 (West); col. 1, lines 25-31). In the "Background of the Invention" section of the patent, West states "fixed copper compounds are water insoluble. *To be effective solid wood preservative, fixed copper compounds must be rendered water soluble. This is commonly accomplished by complexing the fixed copper compounds with ammonia or amines.*" (West; col. 1, lines 24-30). West identifies "fixed copper compounds" as "listed in the literature as including copper oxides, copper hydroxide, basic copper carbonate, basic copper sulfate, and copper oxychloride." (West; col. 1, lines 20-23). Like Goettsche and Heuer, West is directed to using *dissolved/solubilized* copper compounds in wood preservative compositions. Neither Goettsche, Heuer nor West provide a person of ordinary skill in the art any motivation to treat wood with particles of copper compounds as recited in the claims or any reasonable expectation that such a treatment would be effective to, for example, render the wood resistant to fungal decay. In fact, these references teach away from what Applicants claim.

A person of ordinary skill in the art understood that copper acts as a fungicide by precipitation of proteins within the fungi and by interference with enzyme-catalyzed reactions in

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the fungi. Certain fungi, however, were known to be tolerant or resistant to copper. Copper resistance in fungi was associated with the ability of resistant fungi *to precipitate the copper in an insoluble form (copper oxalate or copper citrate, for example), which effectively prevents the copper from interfering with fungal metabolism.* In other words, fungi could inactivate copper by forming solid copper particles. Thus, copper particles were thought to be ineffective against fungi in wood, which is consistent with the state of the art understandings articulated by West, and a person of ordinary skill in the art would not reasonably expect that compositions comprising micronized copper particles would render treated wood resistant to fungal decay.

The ineffectiveness of solid particles of pentachlorophenol in wood preservation was also known at the time the invention was made. At the time of the invention, pentachlorophenol was a known biocidal agent, used to prevent fungal decay in commercial products, such as utility poles. Wood utility poles were treated with pentachlorophenol using liquefied natural gas as a carrier. During treatment, the poles were impregnated with pentachlorophenol dissolved in liquefied natural gas, which was then allowed to evaporate, thereby depositing pentachlorophenol in the wood.

Over time, the pentachlorophenol deposited in the wood *crystallized* in the wood and formed solid particulate pentachlorophenol agglomerates. Poles treated in this way failed due to fungal attack because the agglomeration and formation of particulate pentachlorophenol allowed the fungi to penetrate the wood and colonize regions in the interior of the wood that did not have particulate pentachlorophenol. In other words, solid, particulate pentachlorophenol did not protect the treated wood from fungal attack. Knowing this, a person of ordinary skill in the art would not

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have been motivated to modify Oota or Goettsche to produce the claimed micronized copper particles for use in treatment of wood products. The skilled person also would have no expectation that treating a wood product with the claimed micronized copper particles would render the wood product resistant to fungal decay.

At the time the invention was made, a person of ordinary skill in the art would not reasonably expect compositions comprising micronized copper particles to render wood resistant to fungal decay. The Office asserts that the claims are obvious over the cited references, in part, because combining the elements of Oota and Goettsche would allegedly have produced *predictable results*. (Office Action of May 1, 2009, at sentence spanning pages 14-15). Applicants respectfully disagree that Applicants' invention was obvious or in any way predictable.

As late as 2009, persons of ordinary skill in the art recognized the unpredictability of treating wood with micronized copper particles. In Kartal *et al.*<sup>3</sup>, micronized copper, zinc and boron particles (0.030 micron) were evaluated for leachability and the capacity to prevent mould growth, fungal decay, and degradation by Eastern subterranean termites. Kartal *et al.* report that theirs is the first study to examine resistance to leaching, and the effect of nanopreparations of copper, zinc, and boron on mould fungi, decay fungi, and termites. (See Kartal *et al.* at page 491, column 1).

Kartal *et al.* reports that "leach resistance is a desirable and *unexpected characteristic* of the nanocopper and nanozinc preparations [evaluated in the study]." [emphasis

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<sup>3</sup> Kartal *et al.* (2009) "Do the unique properties of nanometals affect leachability or efficacy against fungi and termites?" International Biodeterioration & Biodegradation 63: 490-495.

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added] (See Kartal *et al.* at page 493, column 2). Also, the “[o]verall, leach resistance of nanozinc and nanocopper was the most promising and *unexpected result* [of the study].” [emphasis added] (Kartal *et al.* at page 494, column 2). Thus, persons of ordinary skill in the art, even as late as 2009, considered the properties and benefits of micronized copper particles in wood preservation unpredictable and unexpected.

Nanomaterials possess unique properties and may behave in *unpredictable* ways (Roco, 2006). Indeed, nanometal characteristics may be *totally different* from the characteristics of the elemental metals and may, in turn, potentially perform in an *unusual manner*. Nanometal preparations have several characteristics (e.g. size and charge), that may improve their performance in wood protection applications (Clausen, 2007)

[emphasis added] (See Kartal *et al.* at page 490, column 1).

Thus, the unpredictability of treating wood with micronized copper particles was recognized even as late as 2009. The unpredictability particularly associated with nano-copper particles is associated with unexpectedly improved resistance to leaching.

B. Claims 116, 122, 130-132, 134-136, 138-140, 142-144 and 149-153 stand rejected under 35 USC § 103(a) as allegedly unpatentable over JP S61-246002 (“Oota”) and AU-B-15117/92 (“Goettsche”) in view of U.S. Patent 5,462,589 to Nicholas and U.S. Patent 6,482,814 to Bath. Applicants respectfully traverse this rejection.

a. **Oota and Goettsche**

The discussion of Oota and Goettsche, above, is incorporated herein by reference.

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**b. Nicholas *et al.***

Nicholas *et al.* does not cure the deficiencies noted of Oota and Goettsche. Nicholas *et al.* do not disclose any micronized particles of biocides, or copper compound. The copper compound of Nicholas *et al.* is *dissolved in an organic solvent*. (col. 3, ll. 33-47). Again, the copper of the wood preservative composition is dissolved or solubilized. Nicholas *et al.* do not contemplate, suggest or teach that copper salt and sodium omadine may be used as a dispersion of micronized particles in water. There is absolutely no teaching or suggestion in Nicholas *et al.* of dispersions of micronized particles of copper compound, wherein the micronized copper compounds are distributed in the wood product and render the wood product resistant to fungal decay.

Nicholas *et al.* does not disclose the claimed invention. Nicholas *et al.* teaches synergistic biocidal compositions comprising a copper salt and an organic biocide selected from the group of tribromophenol, its salts and chelates, and sodium-omadine, its salts and chelates for wood treatment to improve fungi resistance. Contrary to the Examiner's allegation, dispersions of micronized particles of copper compound are not contemplated or disclosed by Nicholas *et al.*

Nicholas *et al.* does not disclose any particles of biocides, or copper compound. The copper compound of Nicholas *et al.* is *dissolved in the organic solvent*. (col. 3, ll. 33-47). Nicholas *et al.* does not contemplate, suggest or teach that copper salt and sodium omadine may be used as a dispersion of micronized particles in water.



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c. Bath

Bath *et al.* does not cure the deficiencies of Oota and Goettsche. Bath *et al.* does not disclose the claimed invention. Bath *et al.* teaches a biocidal composition comprising a N-alkyl-1,2-benzisothiazolin-3-one and a metal complex of a cyclic thiohydroxamic acid for inhibiting the growth of micro-organisms, especially deteriogens of plastics materials in soil burial conditions. The composition of Bath *et al.* comprises benzisothiazolinone formula and a metal complex of a cyclic thiohydroxamic acid. The composition can be applied to dry plastic materials with, optionally, a plasticizer or stabilizer. The Examiner alleged that Bath *et al.* teaches biocidal composition containing solid component can be prepared by any means known to the art including bead, pebble or ball milling the solid in the liquid carrier and the desired particle size of the solid is less than 20 microns. Applicants respectfully point out that Bath *et al.* does not disclose QUAT (quaternary ammonium compounds) or tebuconazole, or compositions comprising copper with QUAT or tebuconazole. Biocides of Bath *et al.* are limited to specific benzisothiazolinone and metal complex of a cyclic thiohydroxamic acid. Bath *et al.* does not disclose any micronized particles of copper compounds. Bath *et al.* is completely silent as to “*a dispersion in water of micronized particles* of basic copper carbonate, copper carbonate or copper hydroxide between 0.001 and 25 microns in water or *a milled copper carbonate* with a particle size of between 0.001 and 25 microns” of the pending claims.

Applicants respectfully requests that the rejections be withdrawn.

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**IV. Conclusion.**

Applicants respectfully assert that the above-referenced application is in condition for allowance. Reconsideration and withdrawal of the outstanding rejections and early notice of allowance to that effect is respectfully requested.

**EXCEPT** for issue fees payable under 37 C.F.R. § 1.18, the Director is hereby authorized by this paper to charge any additional fees during the entire pendency of this application, including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No. 13-3250, reference No. 38184.03402. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F. R. § 1.136(a)(3).

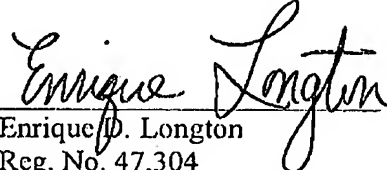
If the Examiner finds that a telephone conference would further prosecution of this application, the Examiner is invited to contact the undersigned at 202-835-7525.

Respectfully submitted,

**MILBANK, TWEED, HADLEY & McCLOY LLP**

Date: June 5, 2009

By:

  
Enrique D. Longton  
Reg. No. 47,304

**Customer No. 38647**  
**MILBANK, TWEED, HADLEY & McCLOY LLP**  
1850 K Street, N.W., Suite 1100  
Washington, DC 20006  
Tel. No. (202) 835-7500  
Fax No. (202) 835-7586

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**Acknowledgement Receipt**The USPTO has received your submission at **15:18:48** Eastern Time on **20-JUN-2006**.

No fees have been paid for this submission. Please remember to pay any required fees on time to prevent abandonment of your application.

**eFiled Application Information**

EFS ID	1085009
Application Number	10821326
Confirmation Number	9700
Title	Micronized wood preservative formulations
First Named Inventor	Robert M. Leach
Customer Number or Correspondence Address	26712
Filed By	Rachel S. Watt
Attorney Docket Number	11474.0328
Filing Date	09-APR-2004
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Application Type	Utility

Supplemental IDS

**Application Details**

Submitted Files	Page Count	Document Description	File Size	Warnings
011474_00328_supp.pdf	2	Transmittal letter	60467 bytes	◆ PASS
011474_00328_PTO1449_2.pdf	4	Information Disclosure Statement (IDS) Filed	10531707 bytes	◆ PASS

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If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

**National Stage of an International Application under 35 U.S.C. 371**

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

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